unique id off the tagged item **21**. The RTMS **10** may analyze usage or movement patterns from this received data to determine that the goods **21** are consumed, diminished, expired, worn down, or otherwise modified, and/or requires an upgrade, replenishment, or replacement. The system **10** can ensure that the upgrade, replenishment, or replacement occurs automatically by communicating with a source **16** that may provide the requested upgrade, replenishment, or replacement to the user environment **18**.

[0051] In some embodiments, other items may be available which enhance or complement the usage of the item **21**. Examples of other items may include an attachment, different flavor, or an associated product which are known for being purchased by other customer, for example, determined using analytics, marketing data, or POS data. The RTMS **10** may communicate with websites, databases, and/or other electronic devices that provide this data, and search for associated items, and determine from this data whether other products may be of interest to the user **15**. The RTMS **10** may use this collected data to "cross-sell" other items by providing recommendations to the user **15**, for example, marketing, advertisement, promotion, etc. to the user **15**, and recommend what items are available for cross-selling. For example, a purchased item may be milk with a tag number **1234**. Once that number is associated with milk and is picked up by the reader **12** on a smart refrigerator, the system may check to see what are items affiliated with milk, such as cookies or chocolate syrup. The time sensitivity is around milk consumption and displaying the right advertisement associated with the product that needs refill, replenishment, or upgraded. Accordingly, the RTMS **10** may proactively recommend certain actions, events, products, services, or other items that may be relevant or helpful to the customer **15** according to various criteria and objectives and based on real-time knowledge about the items **21**.

[0052] In other embodiments, the RTMS can generate item safety warnings, which may be received by the user **15**, more specifically, a computer electronic device such as a smartphone or laptop computer. For example, the tags **22** may monitory the rate at how the corresponding items **21** attached to the tags **22** are diminished, expired, or worn down, which may result in safety-related issues. For example, a tag **22** attached to a smoke detector may determine that the smoke detector battery requires replacement, and send this information to the RTMS **10**, which may generate an alert regarding the need to replace the smoke detector battery, or for other reasons such as monitored rate of use results.

[0053] FIG. **2** is a block diagram of an RTMS **10**, in accordance with some embodiments. The RTMS **10** can be implemented in the environment illustrated and described with respect to FIG. **1**.

[0054] The RTMS **10** may include a registration module **32**, a tag tracking device **34**, an order processor **36**, a customer profile generator **38**, a pattern analyzer **40**, a database **42**, and a notification generator **44**. Some or all of these elements of the RTMS **10** may be present under a same computer hardware platform. In other embodiments, these elements may be located on two or more different computer hardware platform, and can communicate with each other and/or other elements of the RTMS **10** via a communication network, for example, wired or wireless network that exchanges data electronically.

[0055] The registration module **32** registers a plurality of tags **22** with a subscription program so that the tags **22** are each associated with an item **21** at a user environment **18**. The user environment **18** any include tagged IoT devices, for example, described herein, to acquire the necessary upgrade, refill, or replenishment items in accordance with the subscription program. To achieve this, the database **42** may store a set of records that include data received by the RTMS **10** from the tags **22** via the beacon readers **12** in the user environment **18**, each record including a tag identifier, an item identifier that associates the item **21** with the tag **22**, and item data or metadata, for example, historical data about movements and/or use of the item **21**. The records are constructed and arranged so that the system **10** can determine associations between tags and items, and process item-related data for a subscription service.

[0056] As described herein, tags have a unique identification which is associated with a specific item **21**. Some items **21** may be associated with other products in a database of products. The expiration information and upgrades are also maintained which establishes a determination for an item **21** when it needs to be upgraded and with what other items **21** may correspond with this item **21**. Also, a determination may be made regarding an amount of servings that are within an item **21** so that the system can determine when to refill or replenish the item **21**. If the item **21** is constructed to receive refills, then refills are provided. If the whole item **21** needs to be replenished then the item replenishment is provided. If the item **21** has components which need replacement due to wearout or other reason, then a new part may be provided. For example, the item **21** may be a shampoo dispenser which is determined via the tag **22** to need a refill. In another example, a vacuum may be determined to require a replacement of its bag.

[0057] Accordingly, the tag tracking device **34** monitors item location, movement, use, and so on by communicating with the tags **22** associated with the items **21** at the user environment **18** and/or readers **12**. The tag tracking device **34** may store collected data regarding the items **21** at the database **42** or other data storage device.

[0058] The pattern analyzer **40** may process data received by the tag tracking device **34**, and for analyzing usage or movement patterns of the items **21**. Analysis data may be used to predict when items **21** should be replenished, upgraded, or replaced. Analysis data may be used to recommend if an item **21** is to be recalled, what items are available for cross-sell, and/or what alerts are needed for safety. When a recall occurs, the manufacturer sends the data electronically to the consumer computer and/or RTMS **10**, or other predetermined destination. The RTMS **10** may then search for information on the product, for example, the sales representative of the product. The RTMS **10** may can automatically request a replacement for the recalled item, for example, by checking a point of sale (POS) database as to who sold the product. Here, the customer **15** may register for the program which makes tracking the items purchased and who they are, and where they are easier.

[0059] The notification generator **44** may generate from analysis data safety alerts, marketing-related communications such as product advertisements, or other notifications related to the items **21** in the user environment **18**.

[0060] FIG. **3** is a flowchart of a method **100** for configuring an IoT environment for a subscription service, in accordance with some embodiments. Some or all of the